T·PLAN
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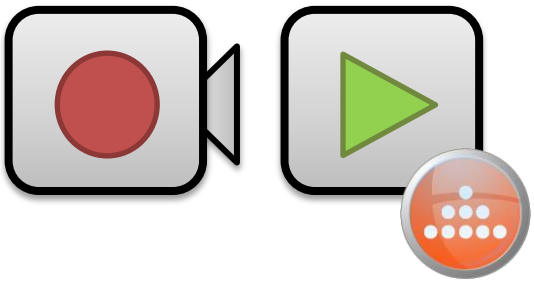
T-Plan Robot Enterprise
Advanced Recorder



User Guide

Summary

This document covers the workings of the new recorder functionality provided within the 4.1 release of T-Plan Robot Enterprise. It intends to describe each option available whilst also providing a guide on how to use the feature.

The feature has been completely redesigned from the ground up to offer a much more robust end product whilst providing a comfortable user experience along the way.

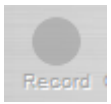
The main driver for this update was the fact that the previous recorder feature produced code that contained hard coded coordinates as a basis for any mouse actions that were performed and therefore recorded. This led many users to the wrong assumption that T-Plan Robot was a coordinate based application – which it isn't!

The areas covered in this document are as follows:

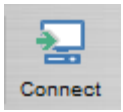
1. Pre-requisites
2. Functionality
   - Interactive Mode
   - Rapid Mode
   - Legacy Mode
3. Related Information
   - New Scripting Command
   - New Command Properties Dialog

Pre-requisites

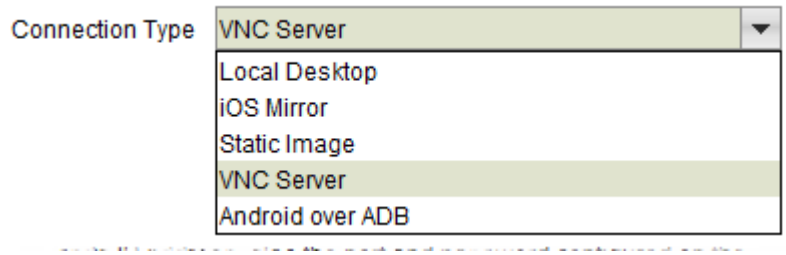
The Recorder is a standard feature within T-Plan Robot Enterprise and is therefore available to all users, almost immediately. In order to make use of the Recorder feature you must first ensure that you have a few certain things in place. Until you have the following in place the recorder option will remain disabled.



Firstly you must ensure that you are connected to a test environment. You can connect via several avenues including the Robot launch screen, the Robot menus or using the menu toolbar.

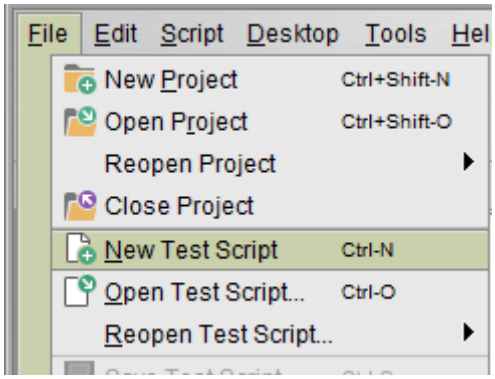


The recorder feature is available for all of the different connection types.



Secondly you must have a Test Script created and open in the editor, which in turn requires the presence of a Test Project.

Both a Project and Test Script can be created under the File menu option.

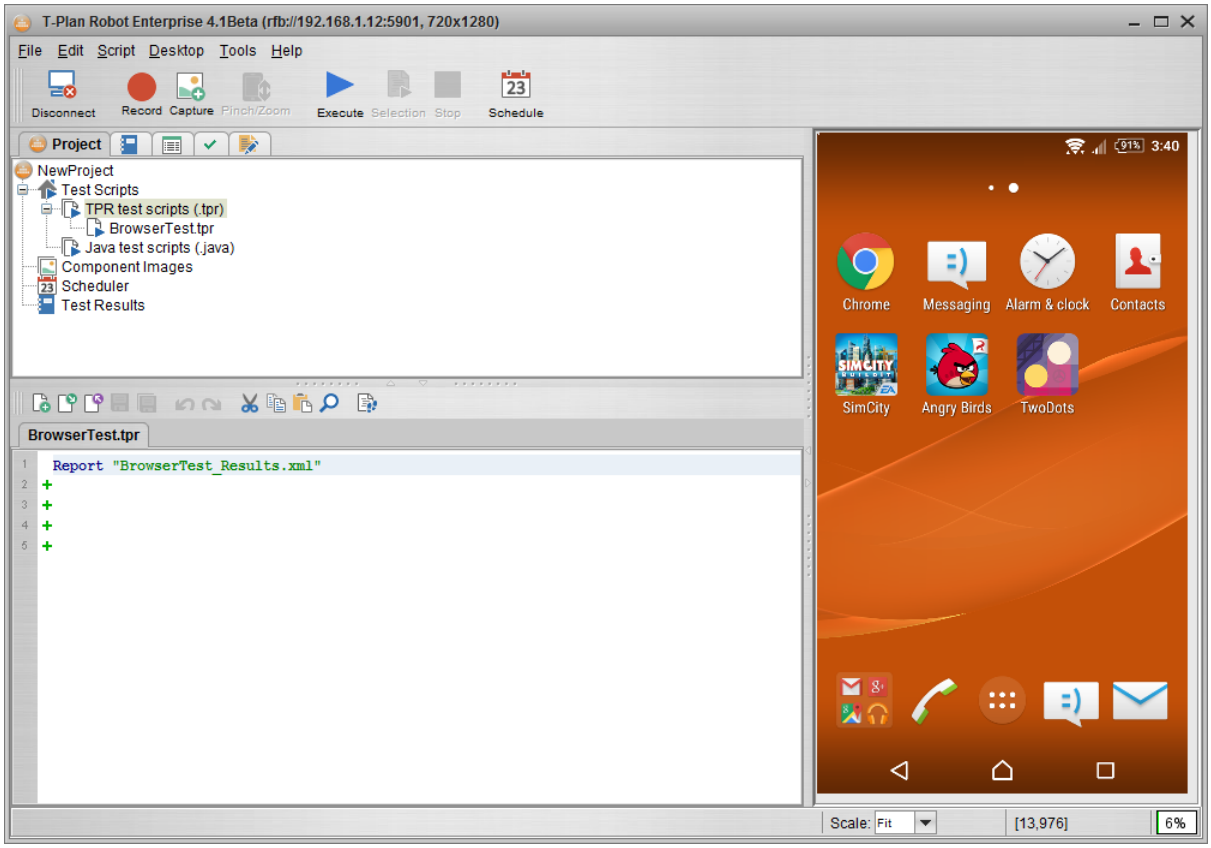


At least one Test Script must be open when the recorder is initiated as it will act as the target for the resulting code.

Functionality

Once all of the pre-requisites are in place you can start using the Recorder feature to automatically generate your script commands based on actions you perform against the currently connected test environment.

The following image shows a typical setup whilst connected to a mobile device. From here we are ready to start recording…



There are a number of ways to initiate the Recorder, these include:

- Select Script|Record from the Robot menu
- Use the keyboard shortcut: Ctrl+Alt+R
- Select the Record icon from the Ribbon bar

The recorder offers three different recording modes. We will discuss each mode in turn throughout the following chapters.

1. Interactive Mode
2. Rapid Mode
3. Legacy Mode

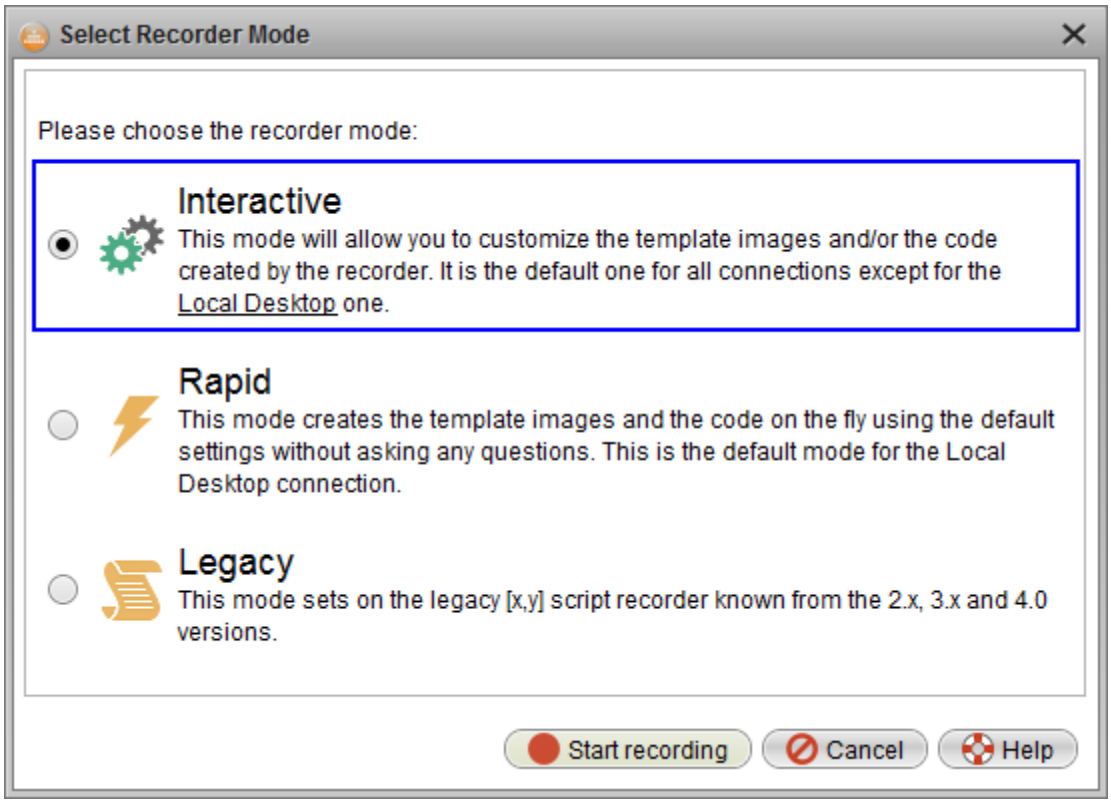
Interactive Mode

This mode gives the user great control at every stage of the recording process. Following each action performed against the live environment the user is able to define the exact commands and parameters that they wish to produce – all achieved through simple dialogs.

NOTE: This recording mode is not available when using the "Local Desktop" connection.

For this scenario we will select the icon:

This will invoke the recorder mode selection window providing the three options already mentioned. For this section we will continue with the first, "Interactive", mode:


Select Recorder Mode
Please choose the recorder mode:
Interactive
This mode will allow you to customize the template images and/or the code created by the recorder. It is the default one for all connections except for the Local Desktop one.
Rapid
This mode creates the template images and the code on the fly using the default settings without asking any questions. This is the default mode for the Local Desktop connection.
Legacy
This mode sets on the legacy [x,y] script recorder known from the 2.x, 3.x and 4.0 versions.
Start recording
Cancel
Help

Once the recorder has been initiated it will then react to every mouse action you perform within the Desktop Viewer window or on your keyboard (as long as your mouse is over the Desktop Viewer to give it focus).

Keyboard actions will be posted directly to the script editor with no interaction required.

When performing a mouse action, i.e. Click, the first thing that Robot does is to analyze the current display:

The purpose of this analysis is to allow Robot to determine the best image template(s) to create. It does so using a complex algorithm to ascertain the best crop section which follows the standard best practises for template creation; keep as small as possible/needed while remaining unique. Remember also that the image template doesn't always necessarily need to have any meaning in its own right.

For further guidelines on best practices please see our general help text and online tutorial.

Once Robot has completed this task internally it will present the suggested crop area along with some controls to customize the action further.

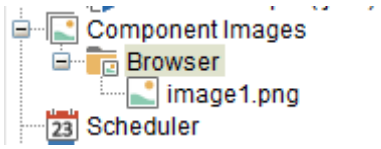
Along with details of the size and location of the cropped selection you will also see a few options, as follows:

	Confirm the selected area and the click point are correct and continue.
	Customize the resulting action based on the current selection. (Explained further below)
"Name"	This is the name you wish to give to the auto-generated Image Collection.
	Existing Collections. Select this if you wish to append the new template to an existing image collection.

To explain each of these options a little further

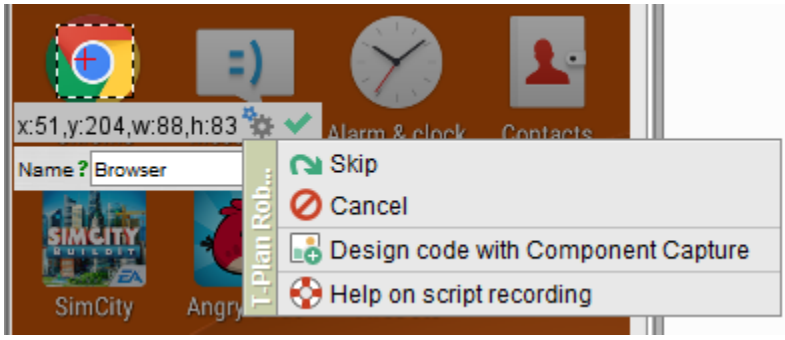
Confirm:

Once you have confirmed the desired action Robot will proceed to apply the action to the SUT, create the Image Collection/template and also insert the required script command into the active editor.



Customize:

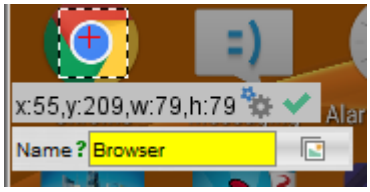
If you select to customize the action you will be presented with three sub options:



- **Skip** – Will apply the click action into the SUT ***without*** recording it to your test script.
- **Cancel** – Will discard the action completely. It will not be applied to the test environment, nor will it generate any code within your test script.
- **Design code with Component Capture** – as it suggests, this will invoke the Component Capture wizard allowing you to customize the action that you wish to be recorded into your test script. (For more details on this option please see the Component Capture section of the online documentation.)

Name:

When entering the name manually, should it match an existing collections name the field will be highlighted yellow.

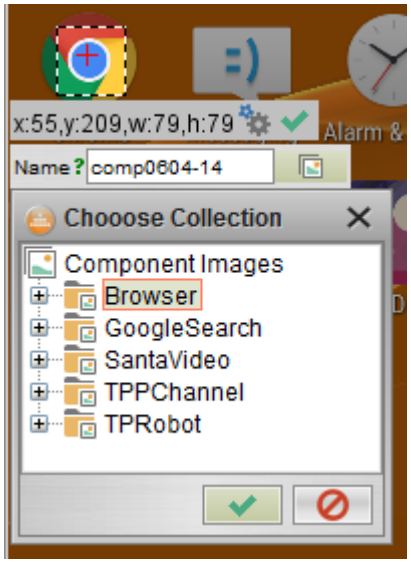


The collection name can be entered as a single value or as a folder path using the standard OS path separator. For example in Windows you could enter “Apps\Web\Browser\”.

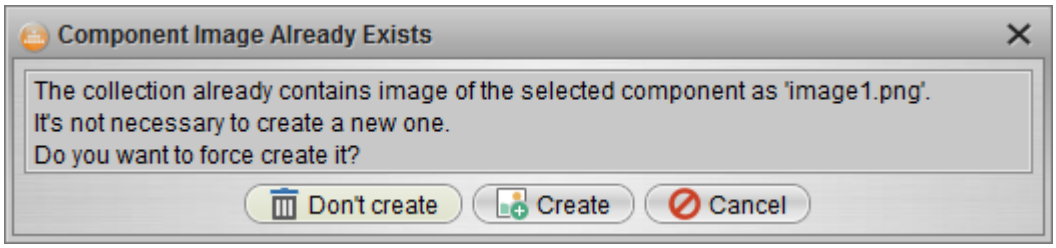
For instances where any folder does not already exist, it will be created otherwise it will be appended at the point of the lowest level existing folder.

Existing Collections:

Selecting the existing collections button will open a small dialog presenting the “Component Images” tree. This allows you to browse all available collections in which to add your new template images.



Should you manually enter or select an existing collection that already contains a similar image template you will be asked to confirm whether or not you still wish to create the new template.


Component Image Already Exists
The collection already contains image of the selected component as 'image1.png'.
It's not necessary to create a new one.
Do you want to force create it?
Don't create
Create
Cancel

You will notice that any keyboard actions applied during the recording process do not invoke any interactive dialogs; instead Robot immediately inserts the relevant script commands into the active editor. Additionally, Robot will insert a “wait” parameter in any command immediately prior to the “Type” or “Press” command.

BrowserTest.tpr

```
1  Report "BrowserTest_Results.xml"
2 +
3  Click "image" template="Browser" wait=2s
4  Click "image" template="GoogleSearch" wait=2s
5  Type "T-Plan Test Automation Youtube"
6  Press "Enter"
7  Click "image" template="TPRobot"
8  Click "image" template="TPPChannel" wait=2s
9  Mouse "wheeldown" count="2"
10 Click "image" template="SantaVideo"
11 Mouse "wheelup" count="6" to="x:327,y:967"
12 Press "F1"
13 +
```

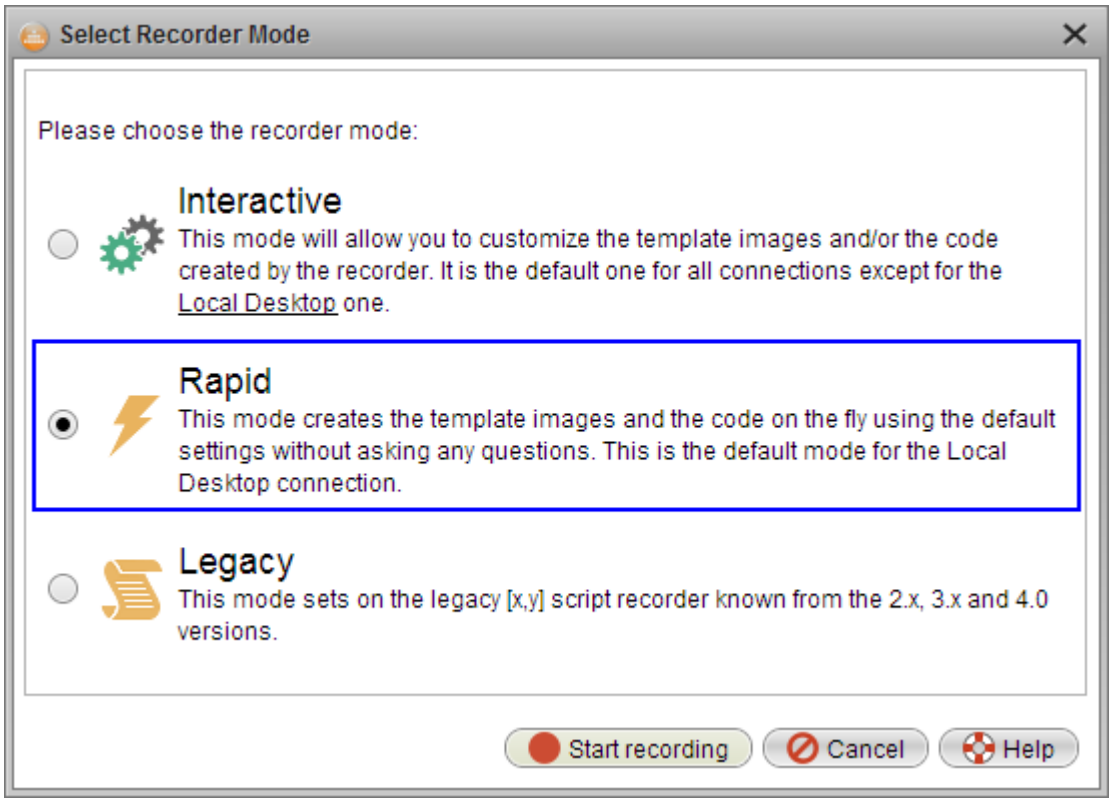
TIP: When applying keyboard actions ensure the mouse pointer remains within the bounds of the Desktop Viewer window in order that the SUT retains the focus and therefore also remains the target of the action.

Rapid Mode

The 'Rapid' mode allows you to concentrate initially on the task at hand, which is to quickly and efficiently record the actions you perform against your test environment such that they can then be replayed thereafter. It does so without interruption instead presenting you with the option to customize the recorded data upon completion.

Given the nature of testing on the "Local Desktop" this is the default recording mode when using this connection type. For this same reason the "interactive" mode is not available under the "Local Desktop" connection.

Once connected to your desired test environment the recording is initiated in the standard ways, as listed previously.

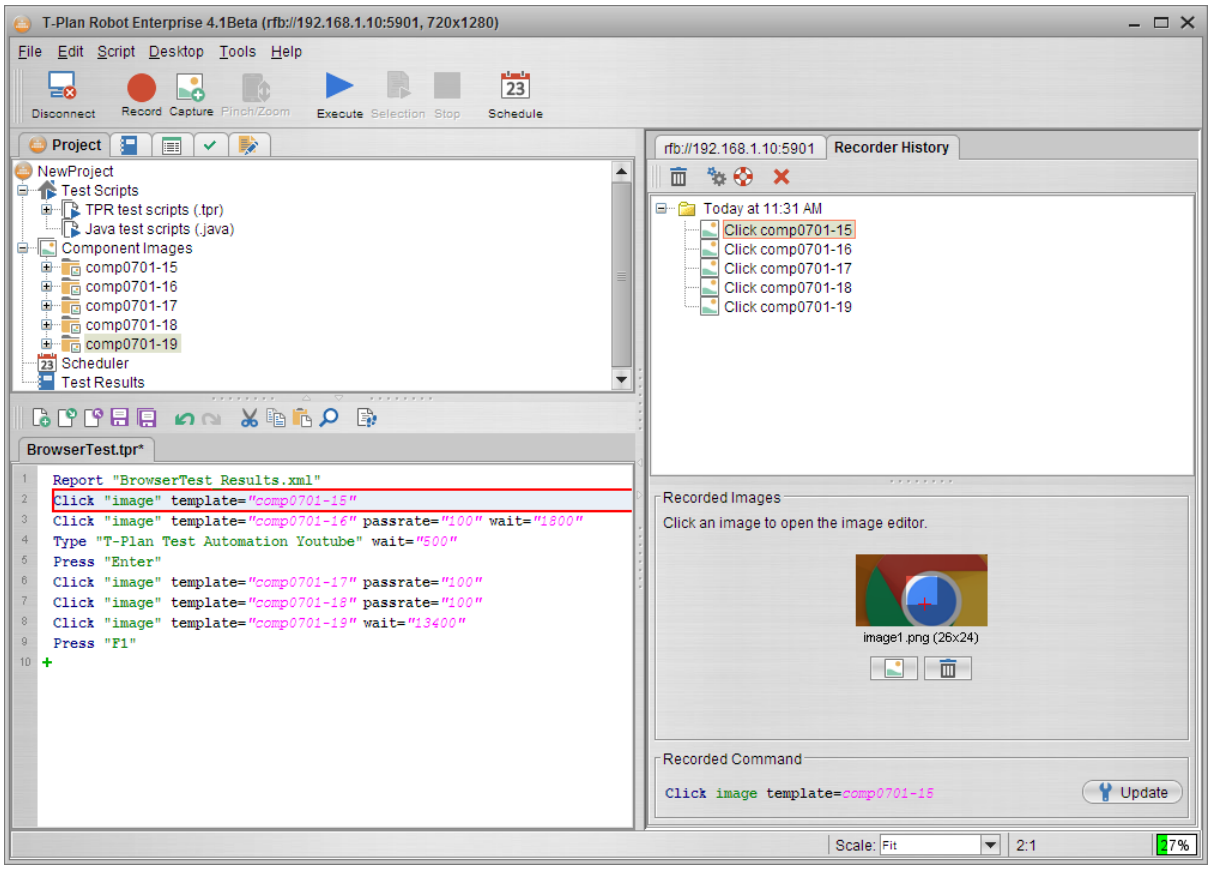

Select Recorder Mode
Please choose the recorder mode:
Interactive
This mode will allow you to customize the template images and/or the code created by the recorder. It is the default one for all connections except for the Local Desktop one.
Rapid
This mode creates the template images and the code on the fly using the default settings without asking any questions. This is the default mode for the Local Desktop connection.
Legacy
This mode sets on the legacy [x,y] script recorder known from the 2.x, 3.x and 4.0 versions.
Start recording
Cancel
Help

Once "Rapid Mode" selection has been made you can immediately begin to perform the desired actions against the SUT.

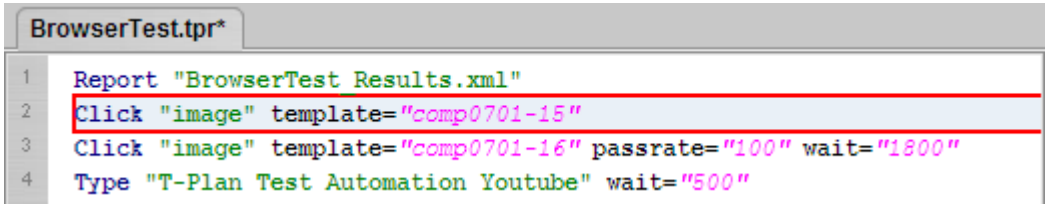
As the name suggests there will be no interactions or popup dialogs presented by Robot, allowing you an uninterrupted session to record your test.

TIP: When using the "Local Desktop" connection you must press RIGHT CTRL to end the recording session and return to the Robot UI.

When you have completed your recording session Robot will display the “Recorder History” window in the right hand pane.



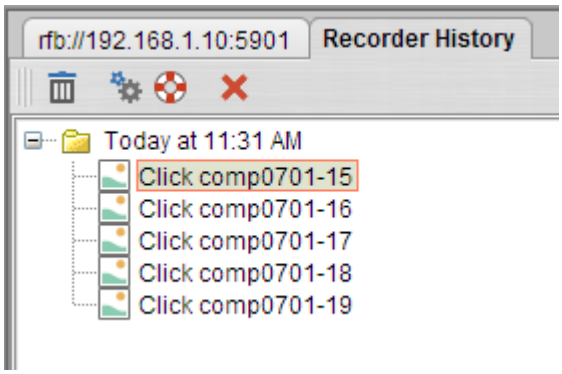
The Recorder History pane also links in with the script editor such that when a line of code is clicked it will not only be highlighted itself but will also display the related captured image(s). Similarly, selecting a captured image on the right will highlight the related line of code in the editor.


BrowserTest.tpr*
1 Report "BrowserTest Results.xml"
2 Click "image" template="comp0701-15"
3 Click "image" template="comp0701-16" passrate="100" wait="1800"
4 Type "T-Plan Test Automation Youtube" wait="500"

The Recorder History panel is presented in a tree view which contains a folder for each recording session performed within the current Robot session. Within each folder it will list each image collection that was generated during the recording.

Within the Rapid mode the image collections are automatically named based on the convention:

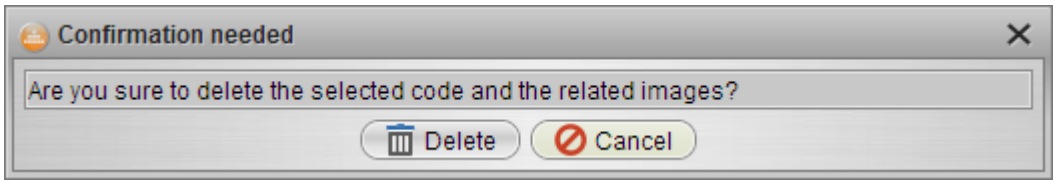
Click comp<mmdd>-<n>



The mini toolbar offers just a few options, namely the ability to Delete the selected image collection.

	Delete the currently selected image collection.
	Quick access to the Script Recorder Preferences.
	Open the Recorder feature Help text.
	Close the Recorder History panel.

Upon selecting Delete, you will be asked to confirm this action before the data is permanently deleted.

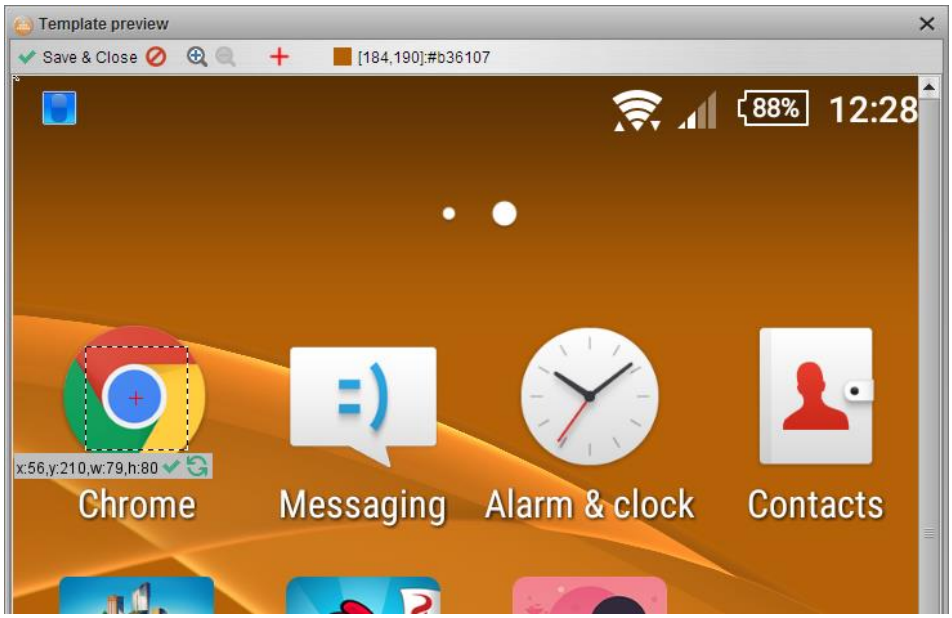


Below the image collection tree you will see a preview thumbnail of each image template that was automatically captured during the recording process for the currently selected collection. This may range from a single template, as below, to a number of templates.

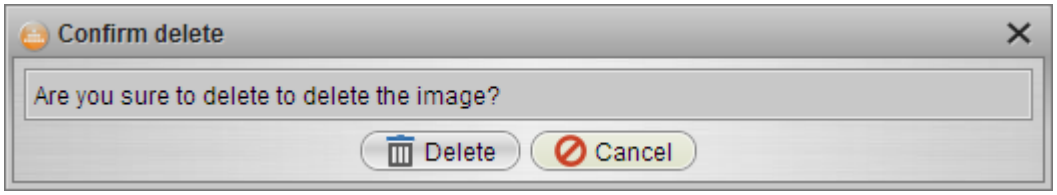
If Robot detects that the clicked item can be displayed differently under certain states it may attempt to capture of these. For example, a button can have various states such as natural, hovered, pressed, etc.

Although Robot captures these various image templates based on a complex intelligent algorithm they may require slight modification to ensure they are as you need. Changes can be made by clicking the image preview or selecting the “Edit” button:

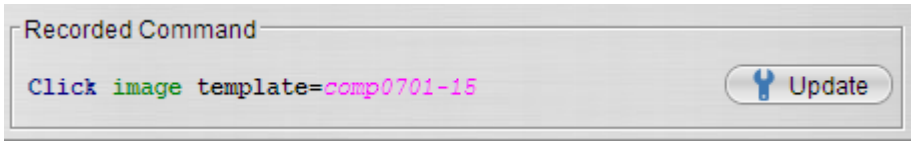
This will open the “Template Preview” window where you can adjust or reselect the desired template area. Here you can also set/reset the click point as required. Once complete select “Save & Close”.



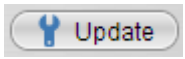
Similarly, you may find that Robot occasionally captures additional or unwanted template images. These can easily be removed from the collection by selecting the “Delete” button below the relevant template preview.



Finally, the bottom pane displays the actual script command that was generated by the recorder for the currently selected collection.



As always any generated code can be edited at any time directly in the script editor window, using any of the scripting aids and wizards. Additionally, the command can be edited from the context of the Recorder History window by selecting the “Update” button.



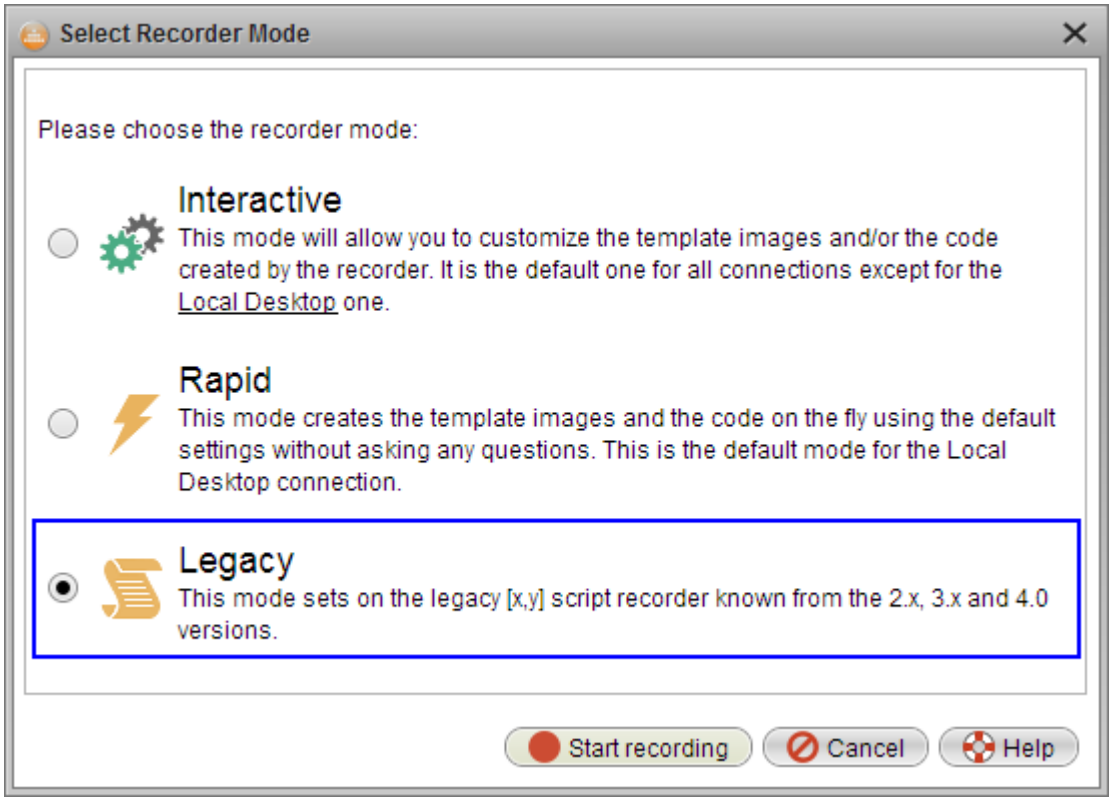
This will invoke the properties for the command allowing you to adjust any parameters as required, including perhaps the search area, tolerance level (“passrate”), etc.

Legacy Mode

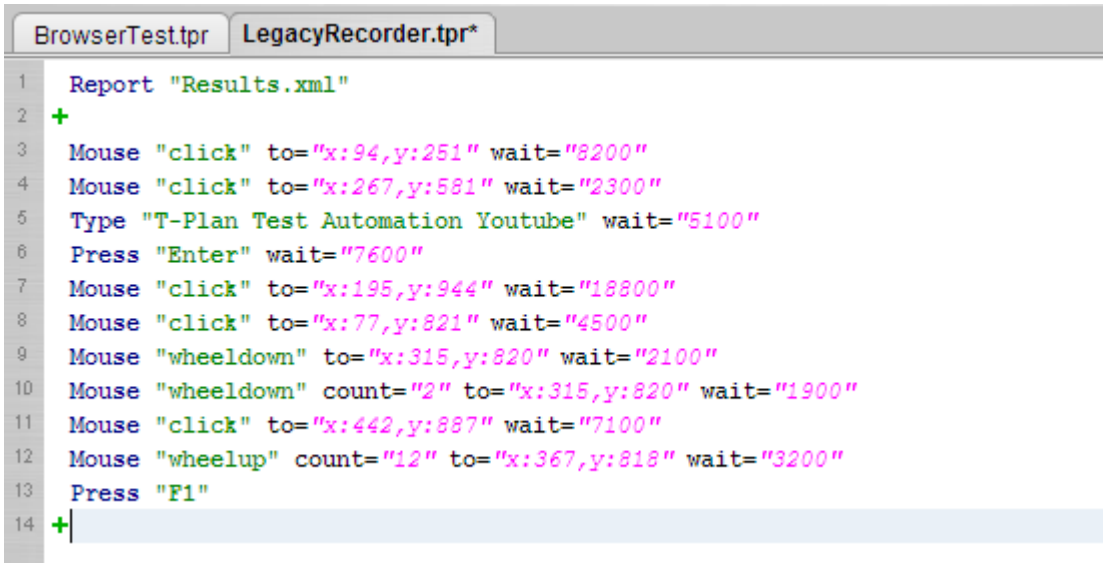
This mode reuses the pre 4.1 recoding mechanism. It records mouse and keyboards actions directly into the script editor with no interruptions or popup interactions. All mouse actions that are performed against the SUT during the recording generate script commands that are based on the mouse location using a coordinate approach.

This mode is generally used where the AUT is stable in terms of its layout and design.

Any changes that are required for the captured commands are achieved through the script editor window using he standard scripting aids and wizards.


Select Recorder Mode
Please choose the recorder mode:
Interactive
This mode will allow you to customize the template images and/or the code created by the recorder. It is the default one for all connections except for the Local Desktop one.
Rapid
This mode creates the template images and the code on the fly using the default settings without asking any questions. This is the default mode for the Local Desktop connection.
Legacy
This mode sets on the legacy [x,y] script recorder known from the 2.x, 3.x and 4.0 versions.
Start recording
Cancel
Help

As the “legacy” mode produces code based on the “Mouse”, “Type” and “Press” commands there is no built in mechanism to ‘wait’ for something to occur, therefore, this mode also inserts a “Wait” parameter for each command thus recording and eventually executing your actions in real time.



Any required image/text comparisons, verification points or screenshots should be inserted after the recording and can be generated using the standard menus and scripting aids.

Related Information

New Scripting Command

Along with the new recorder feature comes a brand new scripting command – “Click”.

The Click command offers a much simplified method of searching for an item and then clicking it, when using either of the image, text or object search types.

Previously a simple ‘find and click’ action required the combination of firstly the search (waitfor/compareto) followed then by an If/Else statement to handle the success or failure outcomes, with the “Mouse click” command within the relevant branch such as:

```
Waitfor "match" method="search2" template="Test1.png" timeout="5s"
if ({_EXIT_CODE} > 0) {
   Exit 1
} else {
   Mouse click to=x:{_COMPARETO_CLICK_X},y:{_COMPARETO_CLICK_Y}
}
```

All of this code can now be replaced with a single simplified command as follows:

```
Click "image" template="Test1.png"
```

The Click command supports the same search parameters as the regular “Waitfor” and “Compareto” commands. It can also be employed with either the image, text or object search methods. All of the parameters and options can be applied and edited through the new “Click” command Properties dialog – see below.

New “Click” Command Properties Dialog

Along with the addition of the new “Click” command comes a new corresponding properties dialog allowing you to create or amend any aspect of the command through a point and click action as opposed to worrying about the code syntax should you make the same changes directly within the code editor.

The “Click Properties” dialog is essentially split into two main sections, as highlighted below. The top section relates to the search options – what you want to find on the screen. Select the desired tab to set the search type (Image, Object or Text) and view all of the corresponding options and parameters.

The bottom section then handles the subsequent click action should the preceding search succeed.